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THESIS

AN ANALYSIS OF QUESTIONS AND EXERCISES IN TEN  
SIXTH GRADE GEOGRAPHY BOOKS ON THE BASIS OF THE  
HIGHER MENTAL PROCESSES REQUIRED IN THEIR SOLUTION

Submitted by  
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In partial fulfillment of requirements for  
the degree of Master of Education.

August, 1948

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AN ANALYSIS OF QUESTIONS AND EXERCISES IN TEN SIXTH  
GRADE GEOGRAPHY BOOKS ON THE BASIS OF THE HIGHER  
MENTAL PROCESSES REQUIRED IN THEIR SOLUTION





## TABLE OF CONTENTS

CHAPTER	PAGE
INDEX TO TABLES . . . . .	ii
I. PURPOSE OF THE STUDY . . . . .	1
Definition of terms . . . . .	1
II. RELATED STUDIES . . . . .	5
III. PROCEDURE USED IN THE STUDY. . . . .	12
Classification of higher mental processes . . . . .	12
Sample questions and exercises of each item in the classification of higher mental processes used in this study . . . . .	14
Books used in this study . . . . .	25
IV. ANALYSIS OF DATA . . . . .	27
V. SUMMARY AND CONCLUSIONS . . . . .	73
BIBLIOGRAPHY . . . . .	75



## LIST OF TABLES

	PAGE
IA. Numerical Distribution of Questions and Exercises Involving Recall in Text Material of Ten Sixth Grade Geography Texts . . . . .	28
IIA. Numerical Distribution of Questions and Exercises Involving Organization of Ideas in Text Material of Ten Sixth Grade Geography Texts . . . . .	30
IIIA. Numerical Distribution of Questions and Exercises Involving Supplementation and Use of Ideas in Text Material of Ten Sixth Grade Geography Texts . . . . .	32
IVA. Numerical Distribution of Questions and Exercises Involving Criticism and Evaluation of Ideas in Text Material of Ten Sixth Grade Geography Texts . . . . .	34
IB. Percentage Distribution of Questions and Exercises Involving Recall in Text Material of Ten Sixth Grade Geography Texts . . . . .	36
IIB. Percentage Distribution of Questions and Exercises Involving Organization of Ideas in Text Material of Ten Sixth Grade Geography Texts . . . . .	38



	PAGE
IIIB. Percentage Distribution of Questions and Exercises Involving Supplementation and Use of Ideas in Text Material of Ten Sixth Grade Geography Texts . . . . .	40
IVB. Percentage Distribution of Questions and Exercises Involving Criticism and Evaluation of Ideas in Text Material of Ten Sixth Grade Geography Texts . . . . .	42
VA. Numerical Distribution of Questions and Exercises Involving Recall in Map and Picture Material of Ten Sixth Grade Geography Texts . . . . .	44
VIA. Numerical Distribution of Questions and Exercises Involving Organization of Ideas in Map and Picture Material of Ten Sixth Grade Geography Texts . . . . .	46
VIIA. Numerical Distribution of Questions and Exercises Involving Supplementation and Use of Ideas in Map and Picture Material of Ten Sixth Grade Geography Texts . . . . .	48
VIIIA. Numerical Distribution of Questions and Exercises Involving Criticism and Evaluation of Ideas in Map and Picture Material of Ten Sixth Grade Geography Texts . . . . .	50



	PAGE
VB. Percentage Distribution of Questions and Exercises Involving Recall in Map and Picture Material of Ten Sixth Grade Geography Texts . . . . .	52
VIB. Percentage Distribution of Questions and Exercises Involving Organization of Ideas in Map and Picture Material of Ten Sixth Grade Geography Texts . . . . .	54
VIIB. Percentage Distribution of Questions and Exercises Involving Supplementation and Use of Ideas in Map and Picture Material of Ten Sixth Grade Geography Texts . . . . .	56
VIIIB. Percentage Distribution of Questions and Exercises Involving Criticism and Evaluation of Ideas in Map and Picture Material of Ten Sixth Grade Geography Texts . . . . .	58
IKA. Numerical Distribution of Questions and Exercises Involving the Main Classifications in Text Material of Ten Sixth Grade Geography Texts . . . . .	60
IXB. Percentage Distribution of Questions and Exercises Involving the Main Classifications in Text Material of Ten Sixth Grade Geography Texts . . . . .	62





XA.	Numerical Distribution of Questions and Exercises Involving the Main Classifications in Map and Picture Material of Ten Sixth Grade Geography Texts . . . . .	.64
XB.	Percentage Distribution of Questions and Exercises Involving the Main Classifications in Map and Picture Material of Ten Sixth Grade Geography Texts . . . . .	.66
XIA.	Numerical Distribution of Questions and Exercises Involving the Main Classifications in Text Material, Map, and Picture Material of Ten Sixth Grade Geography Texts . . . . .	.68
XIB.	Percentage Distribution of Questions and Exercises Involving the Main Classifications in Text, Material, Map and Picture Material of Ten Sixth Grade Geography Texts . . . . .	.70
XII.	Total Numerical and Percentage Distribution of Questions and Exercises Classified Under the Main Headings . . . . .	72



## CHAPTER I

### PURPOSE OF THE STUDY

This study was undertaken for the following reasons:

- 1 to classify questions and exercises in ten sixth grade geography books on the basis of the mental processes required for their solution.
- 2 to determine the degree of the higher mental processes, as defined in this study, that would be involved in the solution of the questions and exercises.

It is the belief of the writer that such information would be of value to teachers, textbook writers, and other persons who are interested in guiding children to their greatest mental development.

### DEFINITION OF TERMS

#### MENTAL PROCESSES

In this study the term mental process is used to mean the mental activities which children use in answering the questions and exercises which they meet in sixth grade geography books.

#### HIGHER MENTAL PROCESSES

In this study the term higher mental processes is used to mean the mental activities other than recall, such as:



organization of ideas; supplementation and use of ideas; and criticism and evaluation of ideas.

Gates<sup>1</sup> states,

It is admittedly difficult to learn to think; the person who acquires the ability must do it through hard work. It is true, too, that psychologists have discovered all too little about the higher thought processes and their education. This lack of evidence on the nature of reasoning and the improvement of problem solving makes it difficult for the teacher to guide pupils in the development of critical thinking. But in spite of pessimism concerning the educability of the higher mental processes, the lack of scientific data, and the difficulty of learning and teaching how to think, there are at least common-sense approaches to the improvement of reason which give promise of value.

Judd<sup>2</sup> states,

One doesn't have to go back far in records of theory and practice of educational institutions of United States to become aware of the fact that there was at one time not long ago, a whole hearted acceptance of the psychology which regards the process of learning as nothing other than memorizing of authoritative statements.

Kelly<sup>3</sup> states,

Much that is called study in the school

- 
1. Arthur I. Gates, Arthur T. Jersild, T.R. McConnell, Robert C. Challman, Educational Psychology, (New York: The MacMillan Company, 1942), p. 466.
  2. Charles Hubbard Judd, Education as Cultivation of the Higher Mental Process. (New York: The MacMillan Co., 1936) p. 139.
  3. William A. Kelly, Educational Psychology (New York: The Bruce Publishing Company, 1935), p. 143





properly implies that the pupil is or should be engaged in a process of reasoning. Reasoning, particularly in the form of problem solving, plays a major part in most school subjects. The school can perform no greater function than to train pupils to reason effectively.

Reading and study are closely connected. Lyman<sup>4</sup> defines study as:

1. Reading - Recognizing meanings; grasping the thought presented in printed symbols.
2. Thinking - Interpreting meanings; reflecting upon the significance of the thought in the light of one's own experience.
3. Utilizing - Making use of meanings; applying the thought to solve some problems of one's own.

Leading educators are of the opinion that experience is a prerequisite to learning.

Wesley and Adams<sup>5</sup> define the steps in learning as:

1. Interest - This can be developed by supplying a background of experience by using material which explains the subject in such a way that the child will go further into the topic.

2. Need or Purpose - To tell the child he needs certain facts is not enough; he must see the need in which the facts will serve a real need for him.

3. Meaning - Pupils must be presented with an overview of the whole topic so that it will have significant

---

5. Edgar Bruce Wesley, Mary A. Adams, Teaching Social Studies in Elementary Schools (Boston: D.C. Heath Co., 1946) p. 63.





meaning for him.

4. Fullness - Detailed narratives are easier to understand than a brief summary.

5. Grading - If material is to be of value to the children, it must be difficult enough to challenge him.

6. Sense and freedom - An atmosphere must be provided where the pupil can be free to make at least some choice of the material which he learns. Under proper leadership he will make few errors.

7. Time and place - The significance of persons, events, intentions, trends, and movements depends upon their being located in time and place.



## CHAPTER II

### RELATED STUDIES

Some of the studies closely related to the one carried on by the writer are as follows.

Deutsche<sup>1</sup> makes the report of some of these studies. Piaget carried on some of the earliest work in the measurement of children's thought processes, with special reference to logical thinking. His technique of attacking these problems has been criticised, but his research is still the basis for investigation in this field. He ties up the progress from egocentrism to socialization. By the method of direct questioning and experiment he studied the children's reaction to the elements and nature. He learned their reaction to boats floating on water, effects of water when a stone is dropped into it. The movement of the clouds was also studied. He based his study on the relationship between ability to predict a given effect and ability to explain its cause.

Grigsby, working with pre-school children studied developmental trends in concepts of time, space, cause, discordance, and number. She found concepts lag far behind

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<sup>1</sup>Jean M. Deutsche, The Development of Children's Concepts of Causal Relations. (Minneapolis: University of Minnesota Press, 1937) pp. 99.



knowledge of necessary words for their expression.

Shaffer, studied concepts of children by use of two techniques

- 1 free expression
- 2 personal interview

Results showed that group testing methods gave as much information as interview methods.

Sander reports a study carried on with abnormal children to determine their ability to finish by, illustrations, stories which had been told to them. The continuation of the stories required a mechanical effect of the previous set up. Normal children interpreted the stories from various points of view. The abnormal children saw only one possible way to illustrate and continued that to the end.

Hazlitt studied children's thinking ability to recognize exceptions and to recognize a common object. She concludes that children can see relations at an early stage.

Mead<sup>2</sup> in an analysis of forty-three work books found the work involved collecting data, expressing one's self, observing, organizing, and comparing. There was a neglect of problem solving.

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<sup>2</sup>Vera Olbert Mead, "What Abilities Are Stressed in Work Books in History?", School Review, Vol. 47, April, 1939. pp. 284-89.



Tiedeman,<sup>3</sup> - the purpose of this investigation was (1) to study the effects of review tests on retention, (2) to determine retention curves for individual items and (3) to determine curves of forgetting for items based on the observation of pictures.

The following facts were concluded as a result of this study.

- (1) The retention of material learned in the class-room is significantly benefited by review tests.
- (2) The rate of forgetting is most accelerated during the first day following learning. After that the retention curves gradually level off.
- (3) The taking of a pre-test has no statistically significant effect on the amounts learned as indicated by a test of retention administered immediately after the learning period.
- (4) There is little similarity in previous knowledge, initial difficulty, and amount retained for items based on the observation of pictures.
- (5) There is considerable variation in the rate of forgetting for individual items. Initial difficulty and the amount learned appear not to be a determining factor.
- (6) Specific information acquired regarding items may in some instances render achievement more difficult on those items.
- (7) Fifth grade children have considerable difficulty in applying and interpreting non-pictorial map symbols found in their geography textbooks.
- (8) The effectiveness of study questions must be determined soon after learning. Forgetting, apparently, quickly obliterates any significant effects that may be derived from the use of study questions.

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<sup>3</sup>Herman R. Tiedeman, "A Study in Retention of Class-Room Learning", Journal of Education Research, Vol. 41, p. 516.







Kyte<sup>4</sup> and four graduate students of the University of California carried on an investigation to determine the children's likes and dislikes of poetry. They found that poetry about subjects such as death, hardship, dancing (for boys) or rugged experiences (for girls) were disliked. The poems that included experiences which did not appeal to them or were not understood by them were also unfavorably received, other poems were rejected because of the moral, the nature of the rhythm and the use of repetition. The results showed most children liked poems which included humor, dramatic action, pleasant experiences, and agreeable subjects.

Witty<sup>5</sup> conducted an experiment with 7,879 pupils in grades one through eight to determine the choice of books of children.

They believed that the child's choice of reading material is of great importance.

They found that the choice of material should include (1) wide variety of well written stories, with appeal to pupils. (2) radio, records, and film strips can foster

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<sup>4</sup>George C. Kyte, "Children's Reactions to Fifty Selected Poems", Elementary School Journal Chicago: University of Chicago Press, Sept., 1946 - June, 1947, Vol. 47, pp. 331-39.

<sup>5</sup>Paul Witty, Ann Coomer, and Dilla McBean, "Children's Choices of Favorite Books: A Study in Ten Elementary Schools." Journal of Educational Psychology. Baltimore, Md.: Warwick and York, Inc. Vol. 37; 1946.



reading interest of children. (3) that newspapers and magazine reading should be included in a balanced program.

McWilliams<sup>6</sup> carried on this reading survey as a result of achievement tests given in grades one to six. He found that directed reading helped children not only improve in rate of reading, but also make gains in spelling and arithmetic.

Malter<sup>7</sup> - this study was undertaken to test the ability of children in grades four to eight to read diagrams in at least two ways. (1) their reaction to total diagrammatic configuration; (2) their reactions to specific parts of the diagram. He states, "An illustrator preparing materials for children may use the following symbols with a reasonable amount of confidence; arrows, designating motion, circles, framing enlargements; and possibly, wavy serrated edges, indicating cut aways. Children experience difficulty in interpreting the following symbols; dash lines, indicating displacement or movement, and straight lines relating members of families."

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<sup>6</sup>John McWilliams, "Improving the Reading Situation", Elementary School Journal, Vol. 47: (Chicago: University of Chicago Press, 1946-1947) pp. 558-62.

<sup>7</sup>M.S. Malter, "The Ability of Children to Read Conventionalized Diagrammatic Symbols", The Journal of Educational Psychology. Vol. 39: Jan., 1948.



Lord,<sup>8</sup> carried on the spatial orientation of children in grades five through eight. He found that children often associate the position of the map with their own bodily position. He suggests all sorts of positions should be provided when map work is taking place.

Wykoff,<sup>9</sup> experimented to determine the relation between (1) a knowledge of grammar and writing. (2) a knowledge of principals of punctuation and writing. This work was based upon the grades of 5,125 pupils. The results proved (1) pupils with a knowledge of grammar rules, will at least ninety per cent of the time write better themes than students with a limited amount of grammar knowledge. (2) pupils with a knowledge of principles of punctuation will write better themes than students with a smaller amount of the same knowledge.

Phillips,<sup>10</sup> analysed the questions and exercises in ten fourth grade geography books to determine the mental processes required for their solution. She found the amount of questions and exercises were very limited and a teacher would have to supply many more in order to make the mental process

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<sup>8</sup>Francis Everette Lord, "A Study of Spatial Orientation of Children". Journal of Educational Research. Vol. 34; March, 1941. pp. 481-505.

<sup>9</sup>George S. Wykoff, "The Relation of Grammar and Punctuation to Writing". Educational Administration and Supervision. Vol. 31: (Baltimore, Md. Warwick and Co., 1945)

<sup>10</sup>L.D. Phillips, "An Analysis and Classification of Questions and Exercises in Ten Fourth Grade Geography Books on the Basis of the Higher Mental Processes Required for Their Solution. Service Paper. (Boston: Boston University, 1945)



be of value.





## CHAPTER III

### PROCEDURE USED IN THE STUDY

#### Classification of Higher Mental Processes

In order to carry out the study to determine the higher mental processes in which pupils must take part to solve the problems set for them in the geography books, it was necessary to prepare a classification upon which the higher mental processes could be based. This classification was based on work done in this field by Phillips.<sup>1</sup> The classification used in this study is as follows:

#### I Recall

- A. Facts in the chapter
- B. Facts in previous chapters
- C. Previous knowledge or experience
- D. Reproduction of drawing
- E. Original drawing explained in text
- F. Recognition

#### II Organization

- A. Select items pertinent to the topic
- B. Classify or arrange

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<sup>1</sup>Laura D. Phillips, "An analysis and classification of the questions and exercises in ten fourth grade geography books in the basis of the higher mental processes required for their solution." Service Paper, Boston, Boston University, 1945.



- C. Find the main point
- D. Find minor points
- E. Make a summary
- F. Make an outline
- G. Prepare a special report
- H. Collect information, pictures, etc. from sources other than textbooks

### III. Supplementation and use of ideas

- A. Find examples
- B. Suggest plan of activity allied to topic
- C. Suggest additional topics for study
- D. Show relationship to other fields
- E. Create or invent new combination of ideas
- F. Apply knowledge to new situations
- G. Relationship
- H. Handwork to illustrate a fact or a principle

### IV. Criticism and evaluation of ideas

- A. Recognizing special merit of ideas
- B. Find exception to point made
- C. Suggest limitations
- D. Analyze methods and motives
- E. Evaluate evidence
- F. Separate fact from opinion
- G. Eliminate unimportant or irrelevant material
- H. Make comparisons
- I. Find differences



J. Find similarities

Sample Questions and Exercises of each item in the classification of mental processes used in this study.

I. Recall

A. Facts in the chapter

How does a "drowned" coast line help people make use of the sea?

Why is sheep raising important in Great Britain?

How does Great Britain help other countries of the world by keeping the Suez route open for the ships of all nations?

B. Facts in previous chapters

How does Australia happen to be part of the British Isles?

Turn back to page 94 and read the directions for making a map.

C. Previous knowledge or experience

Answer these from your own experience

Have you ever tuned in on London on your radio and heard "Big Ben" striking the hour?

Is most of Africa between the tropics or outside the tropics?

D. Reproduction of drawing

Perhaps the pupils in the class can make a large wall map to show the land of the British Empire.

Try to imitate the designs of some famous stained-



glass windows with pieces of colored cellophane.

E. Original drawing - explained in text

Draw five lines running across the paper, so that there will be six panels five inches long and three inches wide. Use a brush for your ink, or if you have no brush, use a pen. Put in five lines with a pen and where you wish a lighter line, absorb some of the ink with a blotter.

Make the following inkograms:

- (1) A tent being built
- (2) A proud Kirghix riding a horse
- (3) Kirghix shepherds tending flocks of sheep and goats
- (4) Protecting the flocks from wolves
- (5) Spinning camels' hair into rope or cloth
- (6) A caravan

Letter neatly the name of each inkogram

Draw two rectangles. Make one rectangle seven inches long and two inches wide and the other rectangle three inches long and two inches wide. In the larger rectangle draw seven stick figures and letter under them the sentence: - Seven out of every ten people in the world are under the rule of Europeans or of European descendants. In the smaller rectangle put three stick figures and put underneath them: - Only three out of





every ten people in the world are not under the rule of the Europeans or of European descendants.

#### F. Recognition

The British manufacturing owes its growth largely to:

- a. good supplies of coal, and smaller, but valuable supplies of iron ore.
- b. a dense population, providing millions of factory workers and a large home market for manufactured goods.
- c. an island location which makes it easy to import raw material and to export manufactured goods.

Have you noticed how many of the cities mentioned are seaports?

Which two of the Balkan countries have the most land suitable for farming?

## II. Organization of ideas

### A. Select items pertinent to the topic

None found

### B. Classify or arrange

Each product in List I below is an important export from one of the French parts of Africa named in List II. The numbers in parenthesis tell how many of the products come from each place. Match the products and the places



correctly.

List I

List II

caco	graphite	Sahara Desert	(2)
cattle	hides	dates	French Sudan (2)
cotton	palm oils	Fr. Guinea Coast	(2)
peanuts		Madagascar	(2)

Each name in this list matches one of the phrases below. Write the names in the same order as the phrases.

Bombay    Ceylon    Hong Kong    New Delhi    Deccan  
Calcutta    Karachi    Rangoon    Himalayas    Madras

1. The highest mountains in the world.
2. The plateau of India.
3. The largest city of India and the world's greatest jute-manufacturing center.
4. The capital of India.
5. India's leading cotton-manuracturing city.
6. The ocean gateway to the Indus Valley.
7. The seaport of southeastern India.
8. The British colony of which Colombo is the capital and seaport.
9. The capital and seaport of Burma.
10. The island near the south coast of China which belongs to the British.

C. Find the main point

None found



D. Find the minor point

None found

E. Make a summary

Name the capital of the Soviet Union and explain as fully as you can why it is the largest city of the country and a great manufacturing center.

What advantages has Europe for carrying on world-wide trade?

F. Make an outline

Make an outline to show how a people who lived two thousands years ago have helped us.

Geography determines what crops can be grown and whether the people can live easily or with difficulty. Decide how geography of England made it a good place for the Industrial Revolution to begin.

G. Prepare a special report

What advantages has France for the support of a strong and prosperous nation?

Answer the question by writing a paragraph telling what advantages France has for (1) agriculture (2) manufacturing (3) carrying on foreign trade (4) transportation.

Explain why the best farm lands of southern Europe are in the plains which have the central European type of climate.





H. Collect information, pictures, etc.

If you were born in the United States, ask your father or mother what country of the Old World was the homeland of your family before they came to America. You may find that your father's people came from one country, and your mother's people came from another. On the map locate the Old World countries which you can claim as family homelands.

Are you sure you can tell the difference between kinds of evergreen trees? Collect small branches and the cones of fir, pine, and spruce trees. Notice the difference in the ways the needles are arranged.

See if your librarian can find you a copy of the Kalevala, which contains many of the myths of the Finns.

III. Supplementation and use of ideas

A. Find examples

None found

B. Suggest plan or activity allied to the topic

None found

C. Suggest additional topics for study

Find a book which tells about Cecil Rhodes and his work in South Africa, and make a report to your class.



Find out what the Rhodes scholarships are and what a boy must do to win one.

Divide your class into two groups. Have each group look up and report on either the Hindu or Mohammedan religion.

D. Show relationship to other fields

None found

E. Create or invent new combination of ideas

Watch for differences between New Zealand and Great Britain as you read on.

How many examples of similar differences in the New World can you give?

Practice making up parts for the story of Joan of Arc. You might take the scene when she first saw the Dauphin, or the one in which the Dauphin was crowned. Divide your class into groups, and have each group responsible for a certain part of the story. Practice the parts separately and when each group is prepared give the story like a play.

F. Application of knowledge to new situation

Judging from the map what kinds of work do you think are most important in Rumania and Bulgaria? What reasons have you to think that these uplands are not too rough for farming?

What facts can you give to prove that the scenery



of Switzerland is a valuable resource?

G. Relationship

See if you can use this chain of words to show that in Denmark even manufacturing depends on agriculture, imports - exports.

Can you suggest a climatic reason for the fact that Queensland's principal city has grown up here rather than farther north on the coast?

H. Handwork to illustrate a fact or a principle

On the map of Africa which you are making, color Egypt in some special way to show that it is an independent country.

Terraced land gives more space for planting than a slope and is easier to plow and to irrigate. You might try to build a small artificial hill-side and then make a terraced slope of the same size.

IV. Criticism and evaluation of ideas

A. Recognizing special merit of ideas presented

The Romans learned how to make arches from the Etruscans. They found out how to make a dome by crossing arches. Do you see how they did this?

B. Finding exceptions to points made

What arguments for permanent world peace are suggested by the fact that there is no military defense against atomic bombs?



C. Suggesting limitations

What difficulties in road building are suggested to you by that long, smooth, winding road of white limestone, disappearing into an enchanting distance?

D. Analyzing methods and motives

You have learned that the British dominions are fully self-governing. What reasons can you give for the fact that the people of the dominions are capable of governing themselves?

Why are people of many other parts of the empire not so well able to manage their own affairs?

E. Evaluating evidence

What problems must the Australians solve in developing their country?

Why is Iceland so dependent on fishing?

Why are the Danes so dependent on farming?

F. Separating fact from opinion

Why is ivory not so important in industry as it was some years ago?

G. Eliminating unimportant or irrelevant material

None found

H. Making comparisons

Would an American feel more at home in Manchuria than in North or South China?

Compare the wheat production of the United States





and Russia; of France and Canada.

Compare the Hamburg water front with that of Rotterdam, shown opposite page 26.

#### I. Finding differences

How does the central part of Ireland differ from the northern and southern parts?

How is the location of Rangoon like the location of Calcutta?

How is the Soviet Union located with reference to the parallel of 50 degrees north latitude?

#### J. Finding similarities

Name at least one place in France where each person described below would find something to remind him of home:

- 1 A dairy farmer from New England
  - 2 A steel-man from Pittsburg
  - 3 A rubber man from Akron
  - 4 A Gloucester fisherman
  - 5 A cotton-manufacturer from Georgia
  - 6 A coal-miner from Pennsylvania
  - 7 A sugar-beet grower from Utah
  - 8 A farmer from the corn belt
  - 9 A California grape-grower
  - 10 An automobile manufacturer from Detroit
- What things about the European sections of Algiers and Tunis are alike? What things about



the native sections of the two cities are alike?  
Some things about the northern part of French  
North Africa and the southern part of British  
South Africa are much alike. What ones can you  
name?



### Books Used in this Study

For the work in this study ten sixth grade geography books were chosen. All the questions and exercises found in each book were analyzed and classified according to the higher mental processes required to solve the same.

The questions and exercises were classified and analyzed in the two following groups:

- 1 questions found in the chapters and at the end of chapters or any other definite section of the text:
- 2 questions and exercises found under maps, pictures and diagrams.

The ten sixth grade geography texts used in this study are listed in the order in which they were analyzed.

1. Atwood, Thomas W., and Thomas, Helen Goss. Nations Overseas. Boston: Ginn and Company, 1946.
2. Stull, De Forest, and Hatch, Roy W. Our World Today Europe and Europe Overseas. Boston: Allyn and Bacon, 1946.
3. Campbell, Edna Fay, Web, Victor L. and Nida, William L. The Old World Past and Present. New York: Scott, Foresman and Company, 1942.
4. McConnell, W.R. Living Across the Seas. New York: Rand McNally and Company, 1939.
5. Barrows, Harlan H., Parker, Edith Putnam, and Sorensen, Clarence Woodrow, Old World Lands. New York: Silver Burdett Company, 1947.
6. Bodley, G.R. and Thurston, E.L. The Old World Continents. New York: Iroquois Publishing Company, Inc., 1940.
7. Stull, De Forest and Hatch, Roy W. Our World Asia, Latin America, United States. Boston: Allyn and Bacon, 1947.





8. Campbell, Fay Edna. Sears, Paul B., Quillen, James I., and Hanna, Paul R. Our World and How We Use It. New York: Scott, Foresman and Company, 1942.
9. Branon, Frederick K. and Ganey, Helen M. The Eastern Hemisphere. New York: W. H. Sadlier Inc., 1948.
10. Carls, Norman. World Neighbors Today. The John C. Winston Company. Philadelphia, 1948.



## CHAPTER IV

### Analysis of Data

The analysis and classification of the exercises and questions used in the study of the ten geography books are presented in the following tables.

Table IA presents the numerical distribution of questions and exercises involving Recall in text material of ten sixth grade geography texts. There were 1,689 questions and exercises classified under Recall. Of these, 807 were classified under recall of Facts in the chapter. Previous knowledge or experience had 672 classifications. Recognition had 91 classifications. Original drawing explained in text had 63 classifications. Facts in previous chapters had 41 classifications. Reproduction of drawing had 16 classifications.



TABLE IA

## NUMERICAL DISTRIBUTION OF QUESTIONS AND EXERCISES INVOLVING RECALL IN TEXT MATERIAL OF TEN SIXTH

## GRADE GEOGRAPHY TEXTS

Book	Facts in the chapter	Facts in previous chapters	Previous knowledge or experience	Reproduction or	Original	Recognition	Total
1	168	6	48	0	0	11	232
2	19	7	53	0	0	15	94
3	12	13	141	0	0	5	171
4	57	4	132	0	0	1	194
5	63	6	49	0	0	2	120
6	123	0	53	0	0	4	180
7	72	0	32	16	1	0	121
8	24	0	26	0	5	4	59
9	126	1	61	0	37	29	254
10	143	4	77	0	20	20	264
Total	807	41	672	16	63	91	1689



Table IIA presents the numerical distribution of questions and exercises involving Organization of Ideas in text material of ten sixth grade geography texts.

There were 1,642 questions and exercises classified under Organization of Ideas. Of these, 639 were classified under Classify or arrange. Prepare a special report had 396 classifications. Make a summary had 384 classifications. Collect information, pictures, etc. had 142 classifications. Select items pertinent to the topic had 42 classifications. Make an outline had 36 classifications. Find main point had 2 classifications. Find Minor point had 1 classification.





TABLE IIA

## NUMERICAL DISTRIBUTION OF QUESTIONS AND EXERCISES INVOLVING ORGANIZATION OF IDEAS IN TEXT MATERIAL

## OF TEN SIXTH GRADE GEOGRAPHY TEXTS

Book	Select pertinent items to the topic	Classify or arrange	Find main point	Find minor point	Make a summary	Make an outline	Prepare a special report	Collect information, pictures, etc.	Total
1	0	169	0	0	59	0	40	8	276
2	17	20	2	1	20	2	41	13	116
3	10	18	0	0	2	1	34	61	126
4	9	156	0	0	81	6	47	1	300
5	0	8	0	0	18	0	15	0	41
6	2	20	0	0	66	1	59	1	149
7	1	10	0	0	33	0	22	8	74
8	0	9	0	0	7	0	33	18	67
9	3	131	0	0	13	26	64	16	253
10	0	98	0	0	85	0	41	16	240
Total	42	639	2	1	384	36	396	142	1642



Table IIIA presents numerical distribution of questions and exercises involving Supplementation and Use of Ideas in text material of ten sixth grade geography tests.

There were 1,902 questions and exercises classified under Supplementation and Use of Ideas. Of these, 388 were classified under Suggest additional topics for study. Find examples had 294 classifications. Relationship had 291 classifications. Suggest plan or activity allied to topic had 240 classifications. Create or invent new combination of ideas had 222 classifications. Handwork to illustrate a fact or a principle had 173 classifications. Show relationship to other fields had 9 classifications.



TABLE IIIA

NUMERICAL DISTRIBUTION OF QUESTIONS AND EXERCISES INVOLVING SUPPLEMENTATION AND USE OF IDEAS IN  
TEXT MATERIAL OF TEN SIXTH GRADE GEOGRAPHY TEXTS

Book	Find examples	Suggest plan or activity allied to topic	Suggest additional topics for study	Show relation- ship to other fields	Create or invent new combina- tion of ideas	Application of knowledge to new situations	Relationship to illustrate a fact or a principle	Handwork	Total
1	27	0	1	0	0	7	11	0	46
2	21	19	25	4	16	25	29	6	145
3	29	50	53	5	34	76	12	37	304
4	25	8	4	0	28	18	46	54	193
5	7	3	24	0	26	38	20	0	118
6	29	10	85	0	11	46	35	2	209
7	8	9	43	0	26	15	23	11	135
8	13	34	21	0	15	14	9	22	128
9	68	41	61	0	17	28	49	36	300
10	67	58	71	0	42	17	57	5	324
Total	294	240	388	9	222	284	291	173	1902

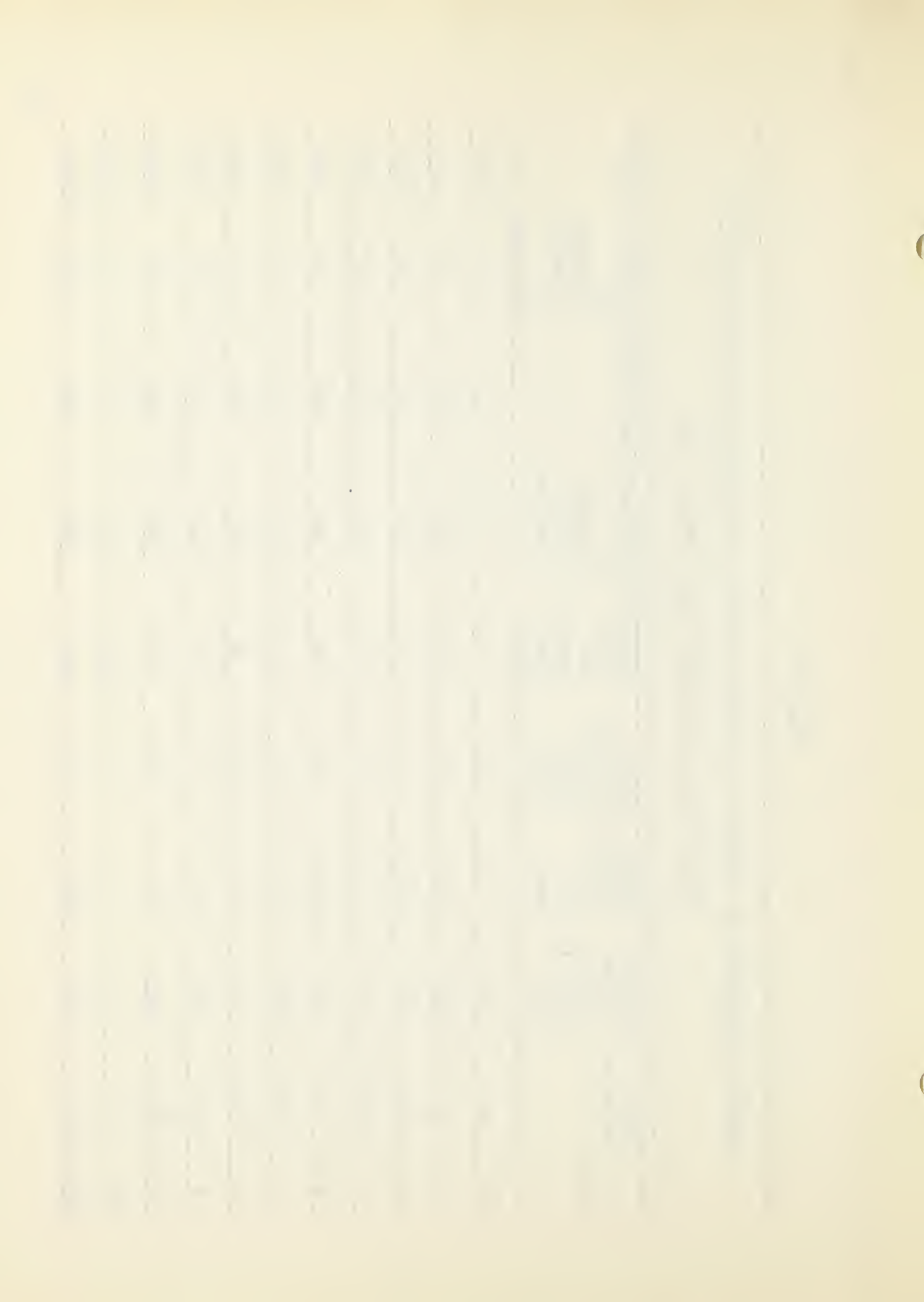


Table IVA presents numerical distribution of questions and exercises involving Criticism and Evaluation of Ideas in text material of ten sixth grade geography texts.

There were 1,816 questions and exercises classified under Criticism and Evaluation of Ideas. Of these, 422 were classified under Analyzing methods and motives. Evaluating evidence had 346 classifications. Making comparisons had 299 classifications. Recognizing special merit of ideas presented had 248 classifications. Separating fact from opinion had 225 classifications. Finding differences had 148 classifications. Finding similarities had 133 classifications. Suggesting limitations had 17 classifications. Finding exception to point made had 1 classification. Eliminating unimportant or irrelevant material had no classifications.







TABLE IVA

NUMERICAL DISTRIBUTION OF QUESTIONS AND EXERCISES INVOLVING CRITICISM AND EVALUATION OF IDEAS  
IN TEXT MATERIAL OF TEN SIXTH GRADE GEOGRAPHY TEXTS

	Recog- nizing special merit of ideas pre- sented	Finding ex- ceptions to point made	Suggesting limi- tations	Analyzing methods and motives	Evalu- ating evidence	Seva- rating fact from opinion	Elimina- ting un- impor- tant or irrele- vant material	Making compar- isons	Finding differ- ences	Finding simi- larities	Total
1	22	0	16	79	0	116	0	43	26	63	367
2	39	0	1	21	3	45	0	30	13	12	139
3	4	0	0	8	34	0	0	24	15	13	98
4	6	0	0	70	93	0	0	42	10	9	230
5	13	1	0	25	24	0	0	16	43	13	135
6	60	0	0	46	52	0	0	29	13	3	203
7	20	0	0	17	26	1	0	16	8	1	89
8	19	0	0	3	10	0	0	8	3	1	44
9	33	0	0	64	0	63	0	32	3	4	199
10	32	0	0	89	104	0	0	59	14	14	312
Total	248	1	17	422	346	225	0	299	148	133	1816

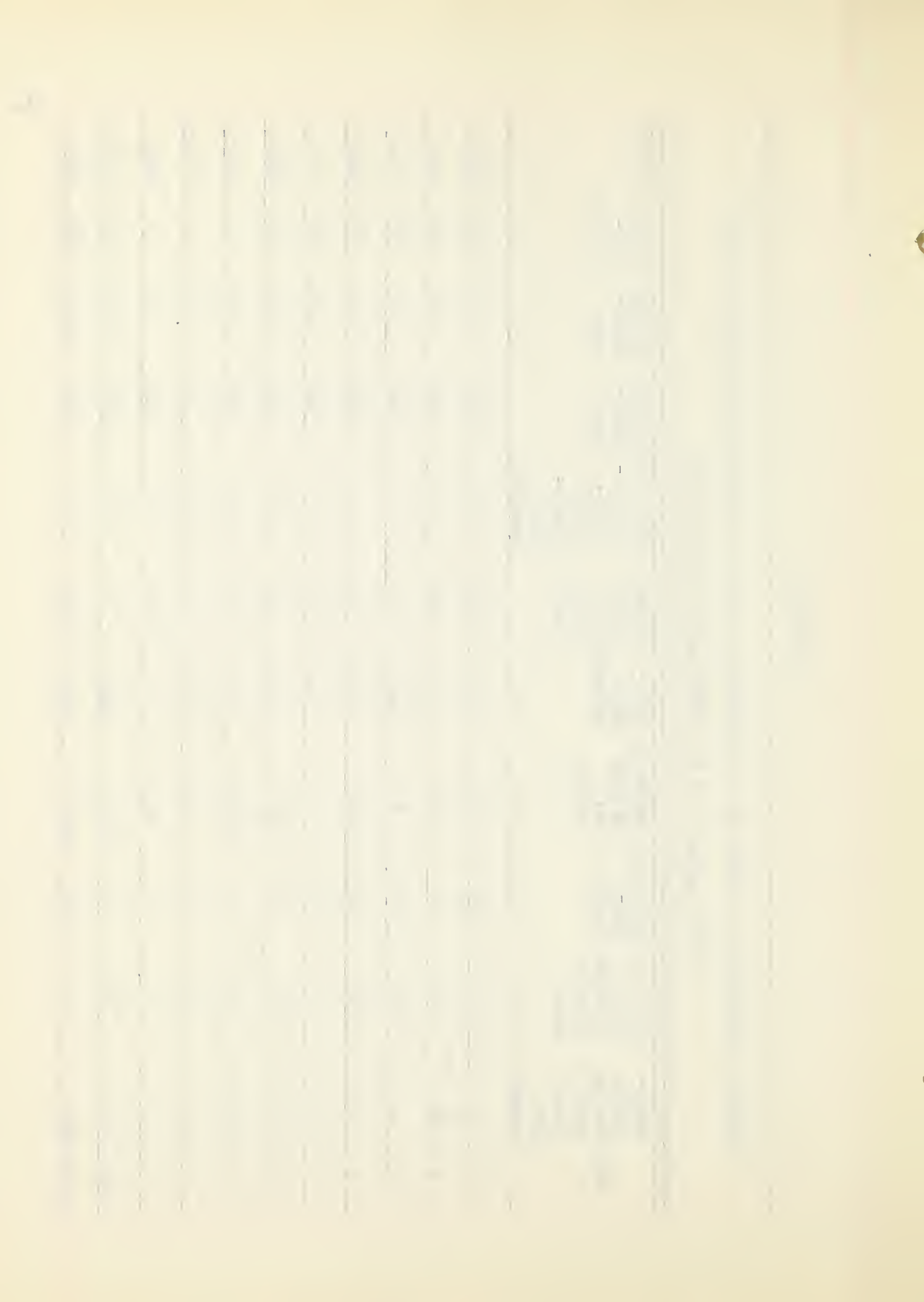


Table IB shows the percentage distribution of questions and exercises involving Recall in text material of ten sixth grade geography texts.

There were 1,689 questions and exercises classified under Recall. Of these, 47.78 per cent were classified under Facts in the chapter. Under Previous knowledge or experience 39.78 were classified. Under Recognition 5.38 per cent were classified. Under Original drawing explained in text 3.73 per cent were classified. Under Facts in previous chapters 2.42 per cent were classified. Under reproduction of drawing .94 per cent were classified.



TABLE IB

## PERCENTAGE DISTRIBUTIONS OF QUESTIONS AND EXERCISES INVOLVING RECALL IN TEXT MATERIAL OF TEN

## SIXTH GRADE GEOGRAPHY TEXTS

Book	Facts in the chapter	Facts in previous chapters	Previous knowledge or experience	Reproduction of drawing	Original drawing explained in text	Recognition
1	72.41	2.58	20.68	0	0	4.74
2	20.21	7.44	56.38	0	0	15.96
3	7.02	7.60	82.46	0	0	2.92
4	39.38	2.06	68.04	0	0	.52
5	52.50	5.00	40.83	0	0	1.66
6	68.33	0	29.44	0	0	2.22
7	59.50	0	26.44	13.22	.82	0
8	40.68	0	44.06	0	8.47	6.78
9	49.61	.39	24.02	0	14.56	11.42
10	54.16	1.52	29.16	0	7.58	7.58
Total	47.78	2.42	39.78	.94	3.73	5.38



Table IIB shows the percentage distribution of questions and exercises involving Organization of Ideas in text material of ten sixth grade geography texts.

There were 1,642 questions and exercises classified under Organization of Ideas. Of these, 38.92 per cent were classified under Classify or arrange. Under Make a summary 23.38 per cent were classified. Under Prepare a special report 24.12 per cent were classified. Under Collect information, pictures 8.64 per cent were classified. Under Select items pertinent to topic 2.56 per cent were classified. Under Make an outline 2.19 per cent were classified. Under Find main point .12 per cent were classified. Under Find minor point, .06 per cent were classified.







TABLE IIB

## PERCENTAGE DISTRIBUTIONS OF QUESTIONS AND EXERCISES INVOLVING ORGANIZATION OF IDEAS IN TEXT

## MATERIAL OF TEN SIXTH GRADE GEOGRAPHY TEXTS

Book	Select items pertinent to the topic	Classify or arrange	Find main point	Find minor point	Make a summary	Make an outline	Prepare a special report	Collect information, pictures
1	0	61.23	0	0	21.36	0	14.49	2.90
2	14.64	17.24	1.72	.86	17.24	1.72	35.34	11.20
3	7.93	14.28	0	0	1.58	.79	26.98	48.41
4	3.00	52.00	0	0	27.00	2.00	15.66	.33
5	0	19.51	0	0	43.90	0	36.58	0
6	1.34	13.42	0	0	44.30	.67	39.60	.67
7	1.35	13.51	0	0	44.59	0	29.72	10.81
8	0	13.43	0	0	10.47	0	49.25	26.86
9	1.18	51.78	0	0	5.12	10.28	25.30	6.32
10	0	40.83	0	0	35.42	0	17.08	6.66
Total	2.56	38.92	.12	.06	23.38	2.19	24.12	8.64



Table III B shows the percentage distribution of questions and exercises involving Supplementation and Use of Ideas in text material of ten sixth grade geography texts.

There were 1,902 questions and exercises classified under Supplementation and Use of Ideas. Of these, 20.40 per cent were classified under Suggest additional topics for study. Under Find examples 15.46 per cent were classified. Under Relationship 15.30 per cent were classified. Under Application of knowledge to new situation 14.93 per cent were classified. Under Suggest plan or activity allied to topic 12.62 per cent were classified. Under Create or invent new combination of ideas 11.67 per cent were classified. Under Handwork to illustrate a fact or a principle 9.10 per cent were classified. Under Show relationship to other fields, .47 per cent were classified.



PERCENTAGE DISTRIBUTION OF QUESTIONS AND EXERCISES INVOLVING SUPPLEMENTATION AND USE OF IDEAS  
IN TEXT MATERIAL OF TEN SIXTH GRADE GEOGRAPHY TEXTS

40





Table IVB shows the percentage distribution of questions and exercises involving Criticism and Evaluation of Ideas in text material of ten sixth grade geography texts.

There were 1,816 questions and exercises classified under Criticism and Evaluation of Ideas. Of these, 23.24 were classified under Analyzing methods and motives. Under Evaluating Evidence 19.05 per cent were classified. Under Making comparisons 16.46 per cent were classified. Under Recognizing special merit of ideas presented 13.66 per cent were classified. Under Separating fact from opinion 12.39 per cent were classified. Under Finding differences 8.14 per cent were classified. Under Finding similarities 7.32 per cent were classified. Under Suggesting limitations .94 per cent were classified. Under Finding exception to point made, .06 per cent were classified. There were no per cent classifications under Eliminating unimportant or irrelevant material.





TABLE IVB

PERCENTAGE DISTRIBUTION OF QUESTIONS AND EXERCISES INVOLVING CRITICISM AND EVALUATION OF IDEAS  
IN TEXT MATERIAL OF TEN SIXTH GRADE GEOGRAPHY TEXTS

	Recog- nizing special merit of ideas pre- sented	Finding exception to point made	Suggest- ing limit- ations	Analyzing methods and motives	Separat- ing fact from opinion	Evaluat- ing evidence	Elimina- ting un- important or irrele- vant material	Making compari- sons	Finding differ- ences	Finding similar- ities
1	5.99	0	4.36	21.52	31.60	0	0	11.72	7.08	17.16
2	28.06	0	.72	15.11	32.38	2.16	0	21.58	9.35	8.64
3	40.82	0	0	8.16	0	34.69	0	24.48	15.30	13.26
4	2.60	0	0	30.48	0	40.43	0	18.26	4.34	3.91
5	9.62	.74	0	18.52	0	17.78	0	11.85	31.85	9.62
6	29.56	0	0	22.66	0	25.62	0	14.28	6.40	1.48
7	22.47	0	0	19.10	1.12	29.29	0	17.98	8.98	1.12
8	43.18	0	0	6.82	0	22.72	0	18.18	6.82	2.27
9	16.52	0	0	32.16	31.66	0	0	16.08	1.50	2.01
10	10.26	0	0	28.52	0	33.33	0	18.91	4.48	4.48
Total	13.66	.06	.94	23.24	12.39	19.05	0	16.46	8.14	7.32



Table VA presents numerical distribution of questions and exercises involving Recall in map and picture material in ten sixth grade geography books.

There were 2,785 questions and exercises under Recall. Of these, 1,431 were classified under Recognition. Facts in the chapter had 759 classifications. Previous knowledge or experience had 476 classifications. Facts in previous chapters had 80 classifications. Original drawing explained in text had 34 classifications. Reproduction of drawing had 2 classifications.



TABLE VA

NUMERICAL DISTRIBUTION OF QUESTIONS AND EXERCISES INVOLVING RECALL IN MAP AND PICTURE MATERIAL  
OF TEN SIXTH GRADE GEOGRAPHY TEXTS

	Facts in the Book chapter	Facts in previous chapters	Previous knowledge or experience	Reproduction of drawing	Original drawing explained in text	Recognition	Total
1	103	32	149	0	0	291	575
2	140	11	84	0	0	110	345
3	199	6	93	0	32	225	558
4	202	23	94	0	0	204	523
5	1	0	3	0	0	70	74
6	0	1	2	0	0	152	155
7	27	0	20	2	0	53	102
8	42	6	5	0	0	32	85
9	32	1	22	0	0	166	221
10	13	0	4	0	2	128	147
Total	759	80	476	2	34	1431	2785



Table VI presents numerical distribution of questions and exercises involving Organization of Ideas in map and picture material in ten sixth grade geography texts.

There were 92 questions and exercises under Organization of Ideas. Of these, 29 were classified under Make a summary. Classify or arrange had 26 classifications. Collect information, pictures had 21 classifications. Select items pertinent to the topic had 9 classifications. Prepare a Special report had 6 classifications. Make an outline had one classification. Find main point and Find minor point had no classifications.





TABLE VIA

NUMERICAL DISTRIBUTION OF QUESTIONS AND EXERCISES INVOLVING ORGANIZATION OF IDEAS IN MAP AND

PICTURE MATERIAL OF TEN SIXTH GRADE GEOGRAPHY TEXTS

	Select items Book pertinent to the topic	Classify or arrange	Find main point	Find minor point	Make a summary	Make an outline	Prepare a special report	Collect information, pictures, etc.	Total
1	0	10	0	0	11	0	0	9	30
2	8	15	0	0	11	1	2	5	42
3	1	0	0	0	0	0	0	0	1
4	0	0	0	0	0	0	0	1	1
5	0	0	0	0	0	0	1	0	1
6	0	0	0	0	0	0	1	0	1
7	0	0	0	0	5	0	0	0	5
8	0	0	0	0	0	0	1	6	7
9	0	1	0	0	2	0	1	0	4
10	0	0	0	0	0	0	0	0	0
Total	9	26	0	0	29	1	6	21	92



Table VIIA presents numerical distribution of questions and exercises involving Supplementation and Use of Ideas in map and picture work in ten sixth grade geography texts.

There were 1,072 questions and exercises classified under Supplementation and Use of Ideas. Of these, 546 were classified under Application of knowledge to new situation. Hand-work to illustrate a fact or a principle had 221 classifications. Relationship had 191 classifications. Find examples had 67 classifications. Suggest additional topics for study had 21 classifications. Suggest plan or activity allied to topic had 13 classifications. Create or invent new combinations of ideas had 9 classifications. Show relationship to other fields had 3 classifications.



TABLE VIIA

NUMERICAL DISTRIBUTION OF QUESTIONS AND EXERCISES INVOLVING SUPPLEMENTARION AND USE OF IDEAS IN  
MAP AND PICTURE MATERIAL OF TEN SIXTH GRADE GEOGRAPHY TEXTS

Book	Find examples	Suggest plan or activity allied to topic	Suggest additional topics for study	Show relationship to other fields	Create or invent new combination of ideas	Application of new knowledge to new situations	Relationship	Handbook to illustrate a fact or a principle	Total
1	13	0	0	0	0	142	60	16	231
2	34	5	3	2	2	69	32	37	184
3	9	2	9	1	2	109	49	34	185
4	0	0	0	0	0	112	23	2	137
5	0	0	0	0	0	5	1	0	6
6	3	0	4	0	0	12	1	24	44
7	2	3	3	0	0	28	5	7	48
8	1	0	2	0	5	17	3	13	41
9	3	0	0	0	0	21	6	5	35
10	2	3	0	0	0	32	11	113	161
Total	67	13	21	3	9	546	191	221	1072



Table VIIIA presents numerical distribution of questions and exercises involving Evaluation of Ideas in map and picture material in ten sixth grade geography texts.

There were 1,717 questions and exercises under Criticism and Evaluation of Ideas. Of these, 551 were classified under Recognizing special merit of ideas presented. Analyzing methods and motives had 399 classifications. Making comparisons had 348 classifications. Evaluating evidence had 175 classifications. Separating fact from opinion had 131 classifications. Finding differences had 69 classifications. Finding similarities had 34 classifications. Suggesting limitations had 10 classifications. Eliminating unimportant and irrelevant material had no classifications.







TABLE VIIIA

## NUMERICAL DISTRIBUTION OF QUESTIONS AND EXERCISES INVOLVING CRITICISM AND EVALUATION OF IDEAS IN

## MAP AND PICTURE MATERIAL OF TEN SIXTH GRADE GEOGRAPHY TEXTS

	Recognizing special merit of ideas presented	Finding exception to point made	Suggesting limitations	Analyzing methods and motives	Evaluating evidence	Separating fact from opinion	Eliminating unimportant or irrelevant material	Making comparisons	Finding differences	Finding similarities	Total
1	3	0	1	9	0	40	0	57	1	6	117
2	208	0	9	130	7	75	0	65	15	7	516
3	154	0	0	144	73	0	0	57	12	11	451
4	107	0	0	90	67	0	0	56	12	0	332
5	3	0	0	2	2	0	0	6	8	2	23
6	11	0	0	0	4	0	0	35	9	3	62
7	24	0	0	12	16	0	0	33	6	1	92
8	21	0	0	3	3	0	0	18	4	2	51
9	18	0	0	7	0	16	0	16	1	2	60
10	2	0	0	2	3	0	0	5	1	0	13
Total	551	0	10	399	175	131	0	348	69	34	1717



Table VB shows the percentage distribution of questions and exercises involving Recall in map and picture material of ten sixth grade geography texts.

There were 2,785 questions and exercises classified under Recall. Of these, 51.38 per cent were classified under Recognition. Under Facts in the chapter, 27.25 per cent were classified. Under Previous knowledge or experience 17.09 per cent were classified. Under Facts in previous chapters, 2.87 per cent were classified. Under Original drawing explained in text 1.22 per cent were classified. Under Reproduction of drawing .07 per cent were classified.



TABLE VB

PERCENTAGE DISTRIBUTION OF QUESTIONS AND EXERCISES INVOLVING RECALL IN MAP AND PICTURE MATERIAL  
OF TEN SIXTH GRADE GEOGRAPHY TEXTS

Book	Facts in the chapter	Facts in previous chapters	Previous knowledge or experience	Reproduction of drawing	Original drawing explained in text	Recognition
1	17.91	5.56	25.91	0	0	50.60
2	40.58	3.18	24.34	0	0	31.88
3	35.66	1.08	16.66	0	5.73	40.32
4	38.62	4.40	17.97	0	0	39.00
5	1.35	0	4.05	0	0	94.59
6	0	.64	1.29	0	0	98.06
7	26.47	0	19.60	1.96	0	51.96
8	49.41	7.06	5.88	0	0	37.64
9	14.48	.45	.99	0	0	75.11
10.	8.84	0	2.72	0	1.36	80.07
Total	27.25	2.87	17.09	.07	1.22	51.38



Table VIB shows the percent distribution of questions and exercises involving Organization of Ideas in map and picture material in ten sixth grade texts.

There were 92 questions and exercises classified under Organization of Ideas. Of these, 31.52 per cent were classified under Make a summary. Under Classify or arrange 28.26 per cent were classified. Under Collect Information, pictures 22.82 per cent were classified. Under Select items pertinent to the topic 9.78 per cent were classified. Under Prepare a special report 6.52 per cent were classified. Under Make an out line 1.08 per cent were classified. There were none classified under Find the main point and Find the minor point.







TABLE VIB

PERCENTAGE DISTRIBUTION OF QUESTIONS AND EXERCISES INVOLVING ORGANIZATION OF IDEAS IN MAP AND  
PICTURE MATERIAL OF TEN SIXTH GRADE GEOGRAPHY TEXTS

Book	Select items pertinent to the topic	Classify or arrange	Find main point	Find minor point	Make an summary	Make an outline	Prepare a special report	Collect information, pictures, etc.
1	0	33.33	0	0	36.66	0	0	30.00
2	19.04	35.71	0	0	26.19	2.38	4.76	11.90
3	100.00	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	100
5	0	0	0	0	0	0	100	0
6	0	0	0	0	0	0	100	0
7	0	0	0	0	100	0	0	0
8	0	0	0	0	0	0	14.28	85.71
9	0	25.00	0	0	50.00	0	25.00	0
10	0	0	0	0	0	0	0	0
Total	9.78	28.26	0	0	31.52	1.08	6.52	22.82



Table VIIB shows the percentage distribution of questions and exercises involving Supplementation and Use of Ideas in map and picture material found in ten sixth geography texts.

There were 1,072 questions and exercises classified under Supplementation and Use of Ideas. Of these, 50.93 per cent were classified under Application of knowledge to new situations. Under Handwork to illustrate a fact or a principle 21.62 per cent were classified. Under relationship 17.82 per cent were classified. Under Find examples 6.25 per cent were classified. Under Suggest additional topics for study 1.96 per cent were classified. Under Suggest plan or activity allied to topic 1.21 per cent were classified. Under Create or invent new combination of ideas .84 per cent were classified. Under Show relationship to other fields .28 per cent were classified.



TABLE VIIB

## PERCENTAGE DISTRIBUTION OF QUESTIONS AND EXERCISES INVOLVING SUPPLEMENTATION AND USE OF IDEAS

## IN MAP AND PICTURE MATERIAL OF TEN SIXTH GRADE GEOGRAPHY TEXTS

Book	Find examples	Suggest play or activity allied to topic	Suggest additional topics for study	Show relationship to other fields	Create or invent new combination of ideas	Application of new knowledge to new situations	Relationship to illustrate a fact or a principle	Handwork
1	5.62	0	0	0	0	61.47	25.97	6.92
2	18.48	2.72	1.63	1.08	1.08	37.50	17.39	20.10
3	4.86	1.08	4.86	.54	1.08	58.92	26.48	2.16
4	0	0	0	0	0	81.75	16.78	1.46
5	0	0	0	0	0	83.33	16.66	0
6	6.82	0	9.09	0	0	27.27	2.27	54.54
7	4.16	6.25	6.25	0	0	58.33	10.42	14.58
8	24.39	0	4.88	0	12.20	41.46	7.32	31.70
9	8.57	0	0	0	0	60.00	17.14	14.28
10	1.24	1.86	0	0	0	19.88	6.83	70.18
Total	6.25	1.21	1.96	.28	.84	50.93	17.82	21.62





Table VIIIB shows percentage distribution of questions and exercises involving Criticism and Evaluation of Ideas in map and picture material in ten sixth grade geography texts.

There were 1,717 questions and exercises classified under Criticism and Evaluation of Ideas. Of these, 32.09 per cent were classified under Recognizing special merit of idea presented. Under Analyzing methods and motives 23.24 per cent were classified. Under Making comparisons 20.26 per cent were classified. Under Evaluation evidence 10.19 per cent were classified. Under Separating fact from opinion 7.62 per cent were classified. Under finding Differences 4.02 per cent were classified. Under Finding similarities 1.98 per cent were classified. Under Suggesting limitations .58 per cent were classified. There were no classifications under Finding exception to point made and Eliminating unimportant or irrelevant material.









Table IXA presents the numerical distribution of exercises and questions involving the Main Classifications in the text of ten sixth grade geography texts. There were 7,049 questions and exercises under the main classifications. Of these, 1,902 were classified under Supplementation and Use of Ideas. Criticism and Evaluation of Ideas had 1,816 classifications. Recall had 1,689 classifications. Organization of Ideas had 1,642 classifications.



TABLE IXA

NUMERICAL DISTRIBUTION OF QUESTIONS AND EXERCISES INVOLVING THE  
MAIN CLASSIFICATIONS IN TEXT MATERIAL OF TEN SIXTH GRADE GEOGRAPHY

## TEXTS

Book	Recall	Organization of ideas	Supplementa- tion and use of ideas	Criticism and use of ideas	Total
1	232	276	46	367	921
2	94	116	145	139	494
3	171	126	304	98	699
4	194	300	193	230	917
5	120	41	118	135	414
6	180	149	209	203	741
7	121	74	135	89	419
8	59	67	128	44	298
9	254	253	300	199	1006
10	264	240	324	312	1140
Total	1689	1642	1902	1816	7049



Table IXB shows the percentage distribution of question and exercises involving the main classifications in text material of ten sixth grade geography texts.

There were 7,049 questions and exercises under the main classifications. Of these, 26.98 per cent were classified under Supplementation and Use of Ideas. Under Criticism and Use of Ideas 25.76 per cent were classified. Under Recall 23.96 per cent were classified. Under Organization of Ideas 23.29 per cent were classified.





TABLE IXB

PERCENTAGE DISTRIBUTION OF QUESTIONS AND EXERCISES INVOLVING THE  
MAIN CLASSIFICATIONS IN TEXT MATERIAL OF TEN SIXTH GRADE GEOGRAPHY  
TEXTS

Book	Recall	Organization of ideas	Supplementation and use of ideas	Criticism and use of ideas
1	25.19	29.96	4.99	39.84
2	19.02	23.48	29.35	28.14
3	24.46	18.02	43.49	14.02
4	21.16	32.72	21.04	25.08
5	28.98	9.90	28.50	32.60
6	24.29	20.10	28.20	27.40
7	28.88	17.66	32.22	21.24
8	19.80	22.48	42.95	14.76
9	25.24	25.14	29.82	19.78
10	23.16	21.05	28.42	27.36
Total	23.96	23.29	26.98	25.76



Table XA presents the numerical distribution of questions and exercises involving the Main Classifications in map and picture material in ten sixth grade geography texts.

There were 5,666 questions and exercises under the main classifications. Of these, 2,785 were classified under Recall. Criticism and use of ideas had 1,717 classifications. Supplementation and use of ideas had 1,072 classifications. Organization of ideas had 92 classifications.



TABLE XA

NUMERICAL DISTRIBUTION OF QUESTIONS AND EXERCISES INVOLVING THE  
MAIN CLASSIFICATIONS IN MAP AND PICTURE MATERIAL OF TEN SIXTH  
GRADE GEOGRAPHY TEXTS

Book	Recall	Organization of ideas	Supplementation and use of ideas	Criticism and evaluation of ideas	Total
1	575	30	231	117	953
2	345	42	184	516	1087
3	558	1	185	451	1195
4	523	1	137	332	993
5	74	1	6	23	104
6	155	1	44	62	262
7	102	5	48	92	247
8	85	7	41	51	184
9	221	4	35	60	320
10	147	0	161	13	321
Total	2785	92	1072	1717	5666



Table XB shows the percentage distribution of questions and exercises involving the main classifications of maps and pictures in the text of ten sixth grade geography texts.

There were 5,666 questions and exercises under the main classifications. Of these, 49.15 per cent were classified under Recall. Criticism and use of ideas had 30.30 per cent classifications. Supplementation and use of ideas had 18.92 per cent classifications. Organization of ideas had 1.62 per cent classifications.





TABLE XB

PERCENTAGE DISTRIBUTION OF QUESTIONS AND EXERCISES INVOLVING THE  
 MAIN CLASSIFICATIONS IN MAP AND PICTURE MATERIAL OF TEN SIXTH  
 GRADE GEOGRAPHY TEXTS

Book	Recall	Organization of ideas	Supplementation and use of ideas	Criticism and use of ideas
1	60.34	3.25	24.24	12.28
2	31.64	3.86	16.92	47.47
3	46.69	.08	15.48	37.74
4	52.66	.10	13.80	33.43
5	71.15	.96	5.76	22.12
6	59.16	.38	16.79	23.66
7	41.30	2.02	19.43	37.24
8	46.20	3.80	22.28	27.72
9	69.06	1.25	10.94	18.75
10	45.79	0	50.16	4.04
Total	49.15	1.62	18.92	30.30



Table XIA presents the numerical distribution of questions and exercises involving the main classification in text, map, and picture material in ten sixth grade geography texts.

There were 12,715 questions and exercises classified under the main headings in text material and map and picture material. Of these, 4,474 were classified under Recall. Under Criticism and evaluation of ideas 3,533 were classified. Under Supplementation and use of ideas 2,974 were classified. Under Organization of ideas 1,734 were classified.



TABLE XIA

NUMERICAL DISTRIBUTION OF QUESTIONS AND EXERCISES INVOLVING THE  
MAIN CLASSIFICATIONS IN TEXT MATERIAL, MAP AND PICTURE MATERIAL  
OF TEN SIXTH GRADE GEOGRAPHY TEXTS

Book	Recall	Organization of ideas	Supplemen- tation and use of ideas	Criticism and evaluation of ideas	Total
1	807	306	277	484	1874
2	439	158	329	655	1581
3	729	127	489	549	1894
4	717	301	330	562	1910
5	194	42	124	158	518
6	335	150	253	265	1003
7	223	79	183	181	666
8	144	74	169	95	482
9	475	257	335	259	1326
10	411	240	485	325	1461
Total	4474	1734	2974	3533	12715



Table XIB shows the percentage distribution of questions and exercises involving the main classifications in text material, map and picture material in ten sixth grade geography texts.

There were 12,715 questions and exercises classified under text, map, and picture material. Of these, 35.18 per cent were classified under Recall. Criticism and use of ideas had 27.78 per cent classifications. Supplementation and use of ideas had 23.38 per cent classifications. Organization of ideas had 13.64 per cent classifications.





TABLE XIB

PERCENTAGE DISTRIBUTION OF QUESTIONS AND EXERCISES INVOLVING THE  
MAIN CLASSIFICATIONS IN TEXT MATERIAL, MAP AND PICTURE MATERIAL  
OF TEN SIXTH GRADE GEOGRAPHY TEXTS

Book	Recall	Organization of ideas	Supplementation and use of ideas	Criticism and evaluation of ideas
1	43.06	16.32	14.78	25.82
2	27.76	9.99	20.80	41.42
3	38.48	6.70	25.81	28.98
4	37.02	15.76	17.28	29.42
5	37.45	8.10	23.94	30.50
6	33.40	14.96	25.22	26.42
7	33.48	11.86	27.48	27.18
8	29.88	15.32	35.06	19.70
9	35.82	19.38	25.26	19.53
10	28.13	16.42	33.20	22.24
Total	35.18	13.64	23.38	27.78



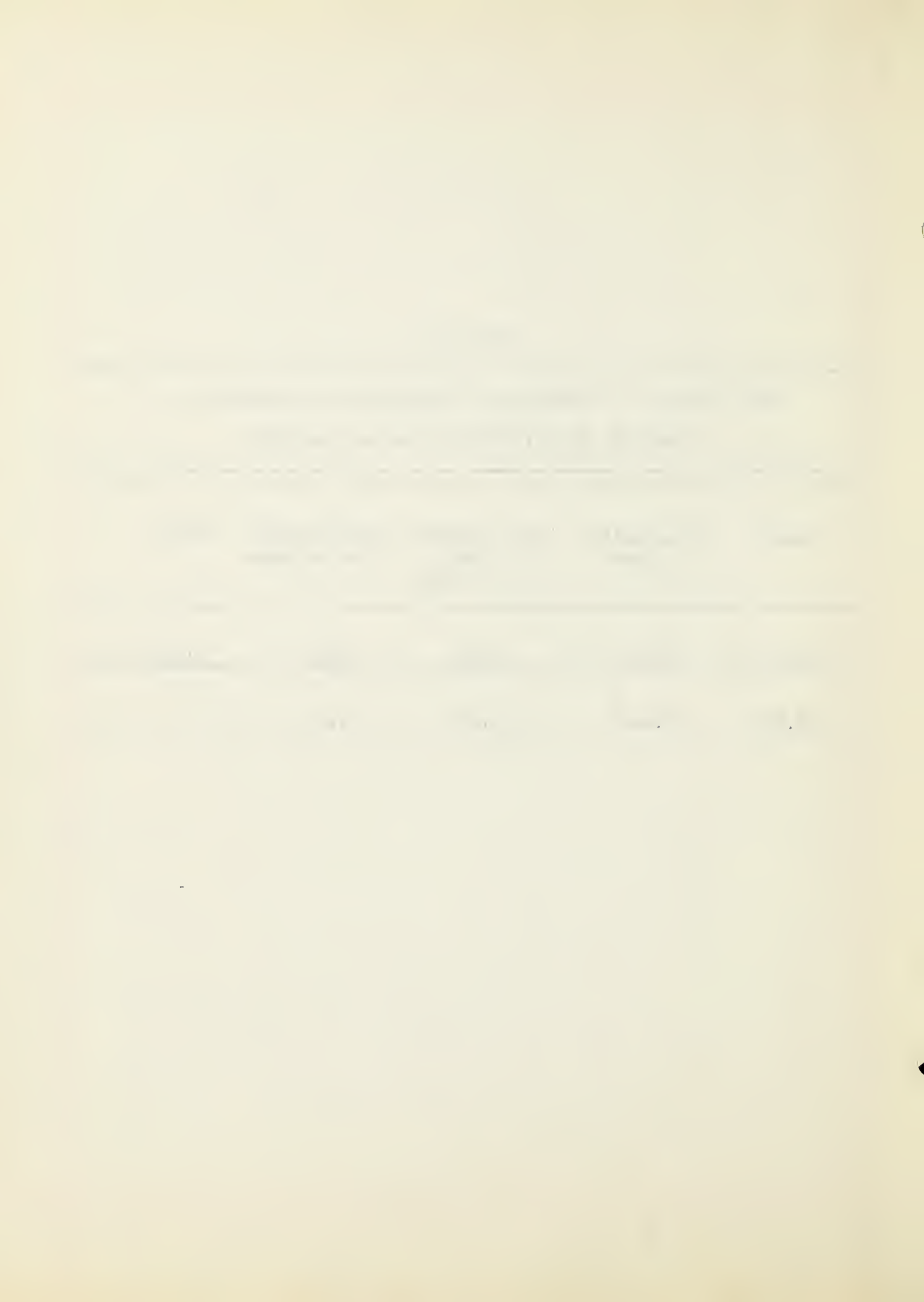
Table XII presents the total numerical and percentage distribution of questions and exercises classified under the main headings.



TABLE XII

TOTAL NUMERICAL AND PERCENTAGE DISTRIBUTION OF QUESTIONS AND  
EXERCISES CLASSIFIED UNDER THE MAIN HEADINGS

Recall	Organization of ideas	Supplementation and use of ideas	Criticism and use of ideas	Total
4474	1734	2974	3533	12715
35.18	13.64	23.38	27.78	



## CHAPTER V

### SUMMARY AND CONCLUSION

This study was carried on to determine the higher mental processes required to solve the questions and exercises in text, map and picture materials of ten sixth grade geography texts.

The term mental process was used to mean the mental activities which children use in answering the questions and exercises in sixth grade geography texts.

The term higher mental processes was used to mean the mental activities other than recall, such as organization of ideas; supplementation and use of ideas; and criticism and evaluation of ideas.

There were 12,715 questions and exercises under the main classifications, of these, 7,049 questions and exercises were classified under material found in the text. Material found under maps and pictures had 5,666 classifications.

Under questions and exercises of text material involving Recall, which is not a higher mental process, book two with ninety-four, and book eight with fifty-nine exercises had the least number of classifications. Book eight, which had the least exercises under Recall, also had the smallest classifications which required use of the higher mental processes.





Although books nine and ten had the largest classifications which did not require the use of the higher mental processes, they also provided the greatest opportunity for the use of this step.

The largest classification of three hundred sixty-seven exercises was found in book one text material under Criticism and use of ideas, as compared with the smallest classification of forty-one under Organization of ideas in book five.

Book one had five hundred seventy-five exercises involving Recall in map and picture material, while the greatest amount calling for use of the higher mental processes was only two hundred thirty-one involving Supplementation and use of ideas in the same book.

Exercises involving Supplementation and use of ideas both in text, map and picture material, of the ten books analyzed, provided the greatest opportunity in the use of the higher mental processes.

Exercises involving Organization of ideas in both text, and map and picture material of the ten books analyzed provided the least opportunity for work in the higher mental processes.

The classification of exercises involving the use of the higher mental processes was more evenly distributed under text material than it was under map and picture material.

A summary of the ten sixth grade geography texts analyzed revealed the fact that there were fewer exercises providing



for the use of the higher mental processes in map and picture material than there were in the text material.

Children must be prepared, in school, to be able to solve the problems they will meet in life. It is the writer's opinion that sixth grade geography texts could be substantially improved by including more questions and exercises involving the use of the higher mental processes as the Social Studies program must be one of the places where the basic work for practice in the higher mental processes should begin.

Therefore, the writer feels that in order to develop higher mental processes in the solution of problems, there should be more exercises and questions to be solved in geography texts involving those processes. In order to do this, many supplementary exercises must be provided by the Social Studies teacher.



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